REMARKS

The drawing, which was objected to, is corrected herein. The Examiner's approval of the corrected drawing is respectfully solicited. The application is also amended relative to the drawing objection.

Claim 2 was objected to because of a missing period, and the claim is amended to correct the error. The Examiner also requested that the term "schema" be replaced with "scheme." Applicants respectfully decline. The word "schema" is used in the art to designate the particular algorithm, or manner, by which encoding is performed. It is respectfully submitted that it is as correct to use the word "schema" as it is to use the word "scheme."

Claim 1 was rejected under 35 USC 112, second paragraph. Claim 1 is amended herein to recite specific steps to evaluate signals in a receiver and to make decisions regarding symbols that were received. It is respectfully submitted that amended claim 1 overcomes the rejection.

Claim 1 was also rejected under 35 USC 101. Applicants respectfully traverse, and submit that at least claim 1 as amended is clearly statutory, since it relates to a method executed within a receiver on received signals (a physical device operating on physical signals), and outputs symbols (physical signals) decided on by the method.

Claim 3 is rejected under 35 USC 103 as being unpatentable over Struhsaker, US Patent 5,923,651 in view of Meehan US Patent 6,115,419. Applicants respectfully traverse.

The Examiner asserts that Struhsaker shows a receiver with an equalizer (78), and that "equalizer 78 is inherently responsive to transmission parameter values of said transmission channel and the encoding scheme within the transmitter so as to train its tap coefficients." Applicants respectfully disagree.

First, although Struhsaker calls element 78 an "equalizer," there is nothing inherent about its operation. Different circuits do different things, and even different equalizers do different things. Therefore, a reader must look to the specification to determine what element 78 purports to do. Only then one might speculate on what is inherent and what is not. Since the term "inherent" is an adjective that relates to an "existing as an essential constituent or characteristic," to something that is "innate,"

"inseparable," or "inalienable," one must be careful to not assert that which is simply not taught as being, *ipso facto*, inherent.

Second, what Struhsaker teaches about equalizer 78 is found within the col. 8 paragraph beginning at line 53, which states:

> Equalizer 78 functions to remove degradations in in-phase component signal 55 and quadrature component signal 57. Equalizer 78 generates signals 59 and 61, and may output data at a rate of R_I/N, which is defined above in the description of transmitter 30 shown in FIG. 2.

From this one cannot tell what degradations equalizer is trying to remove. Even if one were to *assume* that the degradations removed are those due to transmission noise, there is no mention that the equalizer removes such degradations by being responsive to transmission parameter values. That is, being responsive to values that are applied to the equalizer, which values represent the transmission parameters.

An equalizer might address numerous kinds of degradations, and there are different ways by which an equalizer may try to remove degradations. Therefore, there is nothing inherent in equalizers generally, or in equalizer 78 (as described in the reference) in particular. Moreover, there is noting to suggest that equalizer 78 (inherently or otherwise) is responsive to transmission parameter values.

Third, just because equalizer 78 is responsive to two input signals and generates two output signals, where one happens to be an in-phase component (because that is the input) and the other happens to be the quadrature component (because that, too, is the input) does NOT mean that the equalizer is responsive to the schema (i.e., the particular way by which data is encoded). It can very easily be oblivious to the encoding schema using in a transmitter.

The Meehan reference is offered by the Examiner because, according to the Examiner, it teaches an equalizer that is responsive to a plurality of antennas. The Examiner asserts that "it would have been obvious to incorporate the Meehan teachings in the Struhsaker arrangement "in order to improve signal detection.

Respectfully, is may be obvious to have a desire to improve signal detection, but it is not at all obvious how to do it. More particularly, it is not obvious how to create an equalizer -- as defined in claim 3 -- that is (a) responsive to a plurality of antennas, (b) which is also responsive to transmission parameter values, and (c) which is also

responsive to the schema used to create the signals that were transmitted (encoding schema).

Therefore, it is respectfully submitted that claim 3 is not obvious in view of the Struhsake and Meehan combination of references.

Nevertheless, in order to make claim 3 clearer, it is amended herein to explicitly indicate that the encoding schema is one that involves a transmitter that employs a plurality of antennas. As amended, it is believed, that claim 3 even more clearly is not obvious in view of the cited prior art.

In light of the above amendments and remarks, applicants respectfully submit that all of the Examiner's objections and rejections have been overcome. Reconsideration and allowance are, therefore, respectfully solicited.

Respectfully,
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Dated: 12/16/03

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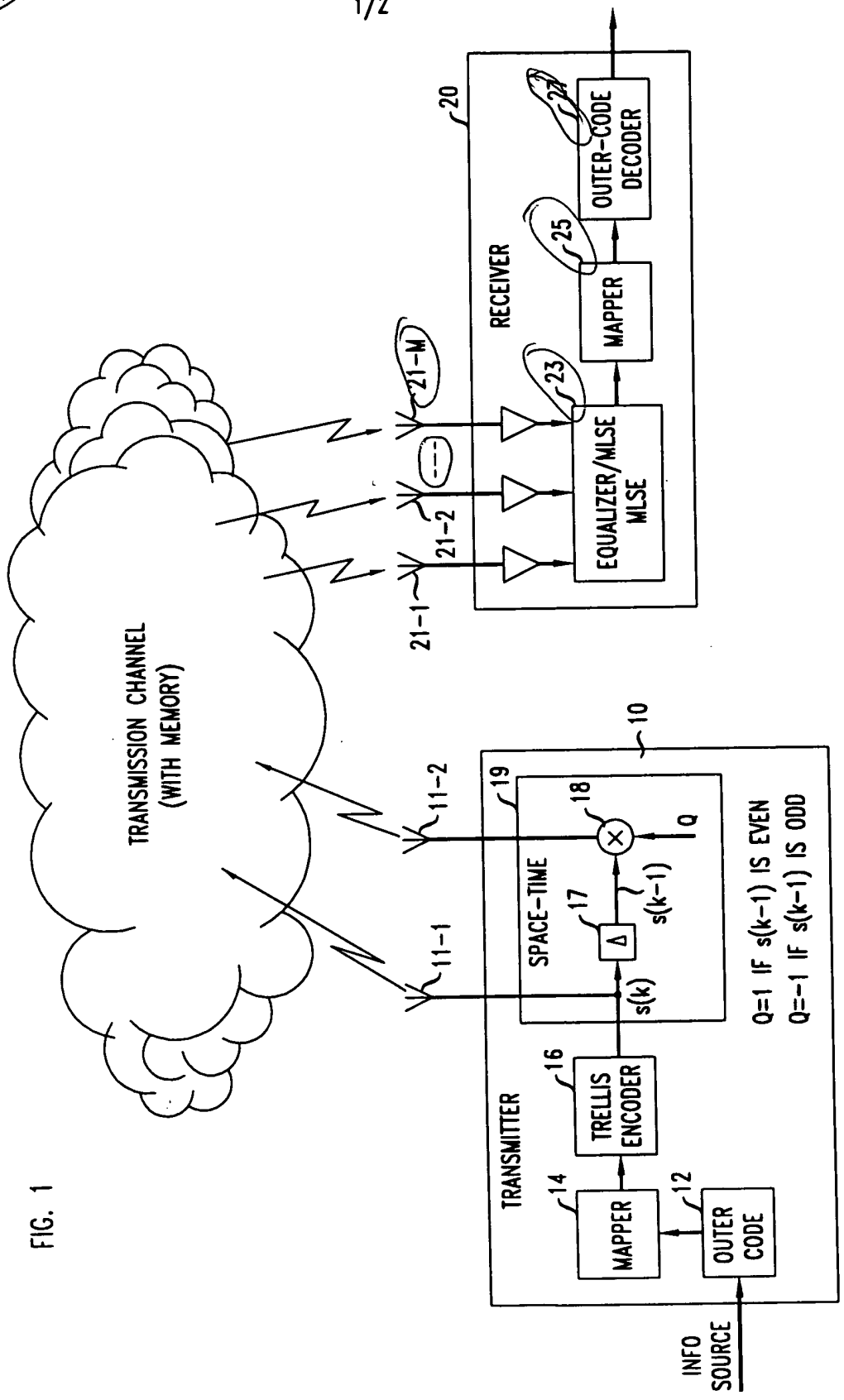

FIG. 1

Approved AN 1/31/04